

*If you are using a printed copy of this procedure, and not the on-screen version, then you **MUST** make sure the dates at the bottom of the printed copy and the on-screen version match.
The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.
Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A.*

C-A OPERATIONS PROCEDURES MANUAL

ATTACHMENT

4.120.22.h AGS Oxygen Deficiency Hazard (ODH) Tests

C-A-OPM Procedures in which this Attachment is used.		
4.120.22		

Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
_____	_____	_____	_____
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Approved: _____ Signature on File _____
 Collider-Accelerator Department Chairman Date

V. Castillo

4.120.22.h AGS Oxygen Deficiency Hazard(ODH) Tests

PASS ANNUAL ACCEPTANCE TEST PROTOCOL

Division A Software Filename and Checksum: Title: _____ Checksum: _____

Division B Software Filename and Checksum: Title: _____ Checksum: _____

Initial testing complete:

Test Team Leader's Name (Print): _____ Life Number: _____

Test Team Leader's Name (Sign): _____ Date: ____/____/____

Acceptance test procedure complete (following repairs and retesting if required):

Test Team Leader's Name (Print): _____ Life Number: _____

Test Team Leader's Name (Sign): _____ Date: ____/____/____

Test results reviewed by:

Safety Section Head's Name (Print): _____ Life Number: _____

Safety Section Head's Name (Sign): _____ Date: ____/____/____

Test results accepted by Radiation Safety Committee:

RSC Member's Name (Print): _____ Life Number: _____

RSC Member's Name (Sign): _____ Date: ____/____/____

- 1.1 Conduct a visual check on AGS A20 ODH box following Table 1 below**
 ✓ = ok, x = problem

ODH Box	Verify mechan condn. ok	Verify elec. condn. ok	Crash/ODH boxes only				Verify all X's corrected
			Division A		Division B		
			Lcd Rdg	Tp2 – Tp4 Vltg	Lcd Rdg	Tp2 – Tp4 Vltg	
ODH1 (encl 6035, AGS A20)	<input type="checkbox"/>	<input type="checkbox"/>	%	V	%	V	<input type="checkbox"/>

Table 1 – Summary of visual check on ODH box in AGS A20

- 1.2 Verification of valid calibration of ODH sensors in AGS A20, following Table 2 below**
 ✓ = ok, x = problem

ODH sensor	Verify valid calibration	Record calibration date	Verify all x's corrected	Record new calibration date
AGS AS1	<input type="checkbox"/>	____/____/____	<input type="checkbox"/>	____/____/____

Table 2 – Verification of valid calibration of ODH sensors in AGS A20

1.3 Test of AGS A20 ODH System

- | | | | |
|--------------------------|---|--|------------|
| <input type="checkbox"/> | VERIFY | At encl 6035, ODH1 Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| | JUMPER | Tp2 and Tp4 on the Div A Pcb in ODH1 | |
| <input type="checkbox"/> | VERIFY | Div A Strobe <input type="checkbox"/> and Sonalert <input type="checkbox"/> | ON |
| | REMOVE | Jumper Tp2 and Tp4 on the Div A Pcb in ODH1 | |
| <input type="checkbox"/> | VERIFY | Div A Strobe <input type="checkbox"/> and Sonalert <input type="checkbox"/> | OFF |
| | JUMPER | Tp2 and Tp4 on the Div B Pcb in ODH1 | |
| <input type="checkbox"/> | VERIFY | Div B Strobe <input type="checkbox"/> and Sonalert <input type="checkbox"/> | ON |
| | REMOVE | Jumper Tp2 and Tp4 on the Div B Pcb in ODH1 | |
| <input type="checkbox"/> | VERIFY | Div B Strobe <input type="checkbox"/> and Sonalert <input type="checkbox"/> | OFF |
| | FLOW | Helium (or Nitrogen) gas across sensors in AGS AS1 | |
| | RECORD | Oxygen trip level for Div A | _____ % |
| | RECORD | Oxygen trip level for Div B | _____ % |
| <input type="checkbox"/> | VERIFY | Div A Strobe <input type="checkbox"/> and Sonalert <input type="checkbox"/> | ON |
| <input type="checkbox"/> | VERIFY | Div B Strobe <input type="checkbox"/> and Sonalert <input type="checkbox"/> | ON |
| | HALT | Flow of gas on AGS AS1 | |
| | WAIT | For AGS AS1 to clear (level ~ trip-level above) | |
| <input type="checkbox"/> | VERIFY | Div A Strobe <input type="checkbox"/> and Sonalert <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | Div B Strobe <input type="checkbox"/> and Sonalert <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | Check for acceptance of Test of AGS A20 ODH System | | |

END OF TEST PROCEDURE

TTL: Sign for completion of initial testing: _____

Date: ____/____/____

TTL: Sign for completion of final testing: _____

Date: ____/____/____